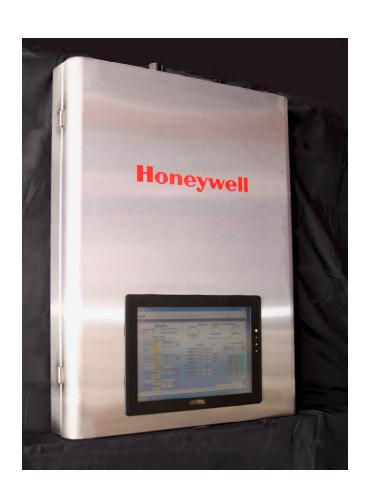


# McDonald's HEMS II

# **Wayport Interface Manual**



## INTRODUCTION

The purpose of this document is to provide general guidelines, for Owner/Operators that have installed the McDonald's AT&T Wayport Connectivity Solution in their restaurants. Wayport will enable them to connect the Honeywell Energy Management System to the Internet.

# **FUNCTION OF OWNER/OPERATOR PORT**

The Owner/Operator port (red) was provided in response to those Owner/Operators who needed the ability to connect devices in the restaurant, other than McDonald's applications, to the Wayport solution, and leverage the access to the Internet; the Wayport Owner/Operator port is used to provide this service.

It contains a single IP address on each side of the Wayport solution for your direct use. This means that you can attach only one computer, router or network appliance device directly to the Wayport solution.

It is important to note that this IP address appears different, depending on whether you are on the inside or outside of the restaurant (see below). On the inside, an internal IP address, and associated information, is used to actually configure the device, and will be used once. This is a private address, and it is masked by the Wayport hardware in order to be protected from attack or compromise. The external IP address is a translated "virtual" IP address, which is used to reach your hardware from the outside (Internet).

## CONNECTION

The Wayport solution contains multiple hardware devices housed in a single cabinet. It will typically only be installed in one of a few locations within the restaurant, with the most probable location being in the manager's office area.

- 1. Locate the Wayport connectivity enclosure.
- 2. There are four ports on the bottom of the enclosure, which are labeled according to the below diagram. Only the first port (red jack) is usable by the Owner/Operator for connection of your equipment. The remaining ports are either actively used for cashless, or designated for McDonald's specific applications. Your Energy Management System or computer will not work properly if you connect to the wrong port.



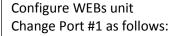
**Typical Wayport Connections** 



Typical Wayport Unit



Linksys BEFSR41 Cable/DSL Router with/4-port switch or equal. Furnished by owner/operator or others. This item <u>is not</u> furnished by Honeywell and <u>does not</u> come with the Wayport Unit. <u>The installer must purchase locally</u>. Configure router from Basic Setup as incoming "Obtain an IP Automatically". Change "Local IP Address" to the following: 192.168.100.1 and leave Subnet Mask at the following: 255.255.255.0. Or change to 255.255.255.252. Configure router to port forward ports 80, 1911 and 3011. Refer to attached router manual for adjustments and settings.



IP Address = 192.168.100.10

Subnet Mask = 255.255.255.0 Or 255.255.255.252

Gateway = 192.168.100.1

Port #2 configured to communicate with Touch Screen PC on

WEBs Unit inside HEMS II Panel

## **SETUP AND OPERATION**

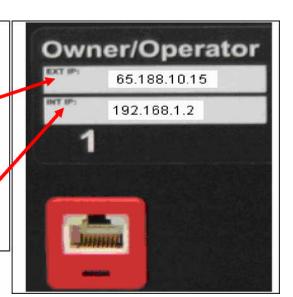
It is not possible for Honeywell to predict or directly support all of the potential types of computers, DVR's, CCTV or other hardware devices which may be attached to the Wayport Owner/Operator port. Please refer to the specific manufacturer's operations and user guides, for the computer or appliance that you would like to connect to the Wayport hardware, for specific information on configuration and setup when linking to Internet facing services.

As described briefly above in the functional area, there is an internal addressing mechanism and an external addressing mechanism, when using the Owner/Operator port. When you want to remotely connect to the HEMS II system; you will use the external IP address in order to connect to the system from your home or office.

**NOTE:** The internal and external IP addressing information that you need should be labeled on the Wayport solution in the restaurant.

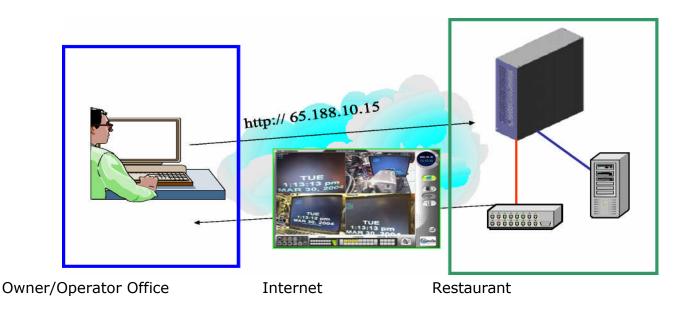
The external IP address (here labeled as 65.188.10.15) is used outside the store, by the Owner/Operator, to reach the device in the restaurant.

The internal IP address is used by the device inside the store to configure to the local network. This information is masked from the outside, for security reasons. In all cases, the device should be configured for an IP



# REMOTELY CONNECTING TO YOUR HEMS II System

If you want to remotely connect to your HEMS II System in the restaurant, you will need to use the external IP address for accessing it. In the <u>example</u> above, you would type 65.188.10.15 into the web browser on your computer in your office or home. Your PC will connect across the Internet to the HEMS II System in the restaurant using only this address. This is an example only. <u>Use the individual IP address assigned to your store</u>.



## **SUPPORT**

Honeywell cannot directly support any of the attached devices an Owner/Operator may choose to connect to this red port. Honeywell's support services are <u>specifically limited</u> to providing assistance to the owner/operator in ensuring that the HEMS II panel is enabled and functioning properly, as well as ensuring the correct information was used to configure the device. Neither McDonald's, Honeywell nor Wayport can provide support for your device itself. You must rely on your manufacturer's service plan, an internal Operator IT staff, or a contracted service you obtain to provide the necessary support for your needs.





# **USER GUIDE**

# EtherFast® Cable/DSL Router with 4-Port Switch

Model: BEFSR41



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# **About This Guide**

# **Icon Descriptions**

While reading through the User Guide you may see various icons that call attention to specific items. Below is a description of these icons:



**NOTE:** This check mark indicates that there is a note of interest and is something that you should pay special attention to while using the product.



**WARNING:** This exclamation point indicates that there is a caution or warning and it is something that could damage your property or product.



**WEB:** This globe icon indicates a noteworthy website address or e-mail address.

# **Online Resources**

Website addresses in this document are listed without **http://** in front of the address because most current web browsers do not require it. If you use an older web browser, you may have to add **http://** in front of the web address.

Resource	Website
Linksys	www.linksys.com
Linksys International	www.linksys.com/international
Glossary	www.linksys.com/glossary
Network Security	www.linksys.com/security

# **Copyright and Trademarks**



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# **Chapter 1: Product Overview**

Thank you for choosing the Linksys by Cisco EtherFast Cable/DSL Router with 4-Port Switch. The Router lets you access the Internet through its four switched ports. You can also use the Router to share resources such as computers, printers and files. A variety of security features help to protect your data and your privacy while online. Security features include a Stateful Packet Inspection (SPI) firewall and NAT technology. Configuring the Router is easy using the provided browser-based utility.

## Front Panel



- Power (Green) The Power LED lights up and will stay on while the Router is powered on. It flashes when the Router goes through its self-diagnostic mode during every boot-up or upgrades its firmware.
- 1, 2, 3, 4 (Green) These numbered LEDs, corresponding with the numbered ports on the Router's back panel, serve two purposes. If the LED is continuously lit, the Router is successfully connected to a device through that port. A flashing LED indicates network activity over that port.
- Internet (Green) The Internet LED lights up when there is a connection made through the Internet port. A flashing LED indicates network activity over the Internet port.

# **Back Panel**



- Reset There are two ways to reset the Router to its factory default settings. Use a straightened paper clip or similar object to press and hold the Reset button for approximately five seconds. You can also restore the defaults from the Administration > Factory Defaults screen of the Router's web-based utility.
- **Internet** The Internet port is where you will connect your cable or DSL Internet connection.
- 1, 2, 3, 4 These Ethernet ports (1, 2, 3, 4) connect the Router to computers on your wired network and other Ethernet network devices.
- **Power** The Power port is where you will connect the power adapter.

# **Chapter 2: Advanced Configuration**

After setting up the Router with the Setup Wizard (located on the CD-ROM), the Router will be ready for use. However, if you'd like to change its advanced settings, use the Router's web-based utility. This chapter describes each web page of the utility and each page's key functions. You can access the utility via a web browser on a computer connected to the Router.

The web-based utility has these main tabs: Setup, Security, Applications & Gaming, Administration, and Status. Additional tabs will be available after you click one of the main tabs.



**NOTE:** When first installing the Router, you should use the Setup Wizard on the Setup CD-ROM. If you want to configure advanced settings, use this chapter to learn about the web-based utility.

# **How to Access the Web-Based Utility**

To access the web-based utility, launch the web browser on your computer, and enter the Router's default IP address, **192.168.1.1**, in the *Address* field. Then, press **Enter**.

A login screen will appear. Leave the *User Name* field blank. The first time you open the web-based utility, use the default password **admin**. (You can set a new password from the *Administration* > *Management* screen.) Click **OK** to continue.



Login Screen

# Setup > Basic Setup

The first screen that appears is the *Basic Setup* screen. This allows you to change the Router's general settings.



Setup > Basic Setup

## **Internet Setup**

The Internet Setup section configures the Router to your Internet connection. Most of this information can be obtained through your Internet Service Provider (ISP).

## **Internet Connection Type**

Select the type of Internet connection your ISP provides from the drop-down menu. These are the available types:

- Obtain an IP Automatically
- Static IP
- PPPoE
- RAS
- PPTP
- Heart Beat Signal
- L2TP

## **Obtain an IP Automatically**

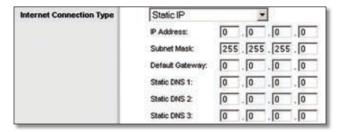
By default, the Router's Internet Connection Type is set to **Obtain an IP automatically**, which should be kept only if your ISP supports DHCP or you are connecting through a dynamic IP address. (This option usually applies to cable connections.)



Internet Connection Type > Obtain an IP Automatically

#### Static IP

If you are required to use a permanent IP address to connect to the Internet, select **Static IP**.



Internet Connection Type > Static IP

**IP Address** Enter the Router's IP address, as seen from the Internet. This is provided by your ISP.

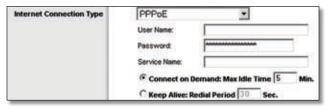
**Subnet Mask** Enter the Router's subnet mask, as seen by users on the Internet (including your ISP). This is provided by your ISP.

**Default Gateway** Your ISP will provide you with the IP address of the ISP server.

**Static DNS 1-3** Your ISP will provide you with at least one DNS (Domain Name System) server IP address.

#### **PPPoE**

Some DSL-based ISPs use PPPoE (Point-to-Point Protocol over Ethernet) to establish Internet connections. If you are connected to the Internet through a DSL line, check with your ISP to see if they use PPPoE. If they do, you will have to enable **PPPoE**.



Internet Connection Type > PPPoE

**User Name and Password** Enter the User Name and Password provided by your ISP.

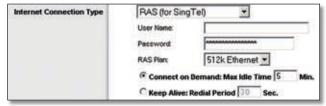
**Service Name** If provided by your ISP, enter the Service Name.

Connect on Demand: Max Idle Time You can configure the Router to cut the Internet connection after it has been inactive for a specified period of time (Max Idle Time). If your Internet connection has been terminated due to inactivity, Connect on Demand enables the Router to automatically re-establish your connection as soon as you attempt to access the Internet again. To use this option, select Connect on Demand. In the Max Idle Time field, enter the number of minutes you want to have elapsed before your Internet connection terminates. The default Max Idle Time is 5 minutes.

**Keep Alive: Redial Period** If you select this option, the Router will periodically check your Internet connection. If you are disconnected, then the Router will automatically re-establish your connection. To use this option, select **Keep Alive**. In the *Redial Period* field, you specify how often you want the Router to check the Internet connection. The default Redial Period is **30** seconds.

#### RAS

Remote Access Service (RAS) is a service that applies to connections in Singapore only. For users in Singapore, check with Singtel for information on RAS.



Internet Connection Type > RAS

**User Name and Password** Enter the User Name and Password provided by Singtel.

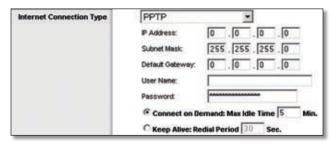
**RAS Plan** Select the type of plan you have.

Connect on Demand: Max Idle Time You can configure the Router to cut the Internet connection after it has been inactive for a specified period of time (Max Idle Time). If your Internet connection has been terminated due to inactivity, Connect on Demand enables the Router to automatically re-establish your connection as soon as you attempt to access the Internet again. To use this option, select Connect on Demand. In the Max Idle Time field, enter the number of minutes you want to have elapsed before your Internet connection terminates. The default Max Idle Time is 5 minutes.

**Keep Alive: Redial Period** If you select this option, the Router will periodically check your Internet connection. If you are disconnected, then the Router will automatically re-establish your connection. To use this option, select **Keep Alive**. In the *Redial Period* field, you specify how often you want the Router to check the Internet connection. The default value is **30** seconds.

#### **PPTP**

Point-to-Point Tunneling Protocol (PPTP) is a service that applies to connections in Europe only.



Internet Connection Type > PPTP

**IP Address** Enter the Router's IP address, as seen from the Internet. This is provided by your ISP.

**Subnet Mask** Enter the Router's subnet mask, as seen by users on the Internet (including your ISP). This is provided by your ISP.

**Default Gateway** Your ISP will provide you with the IP address of the ISP server.

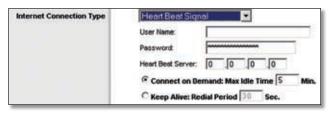
**User Name and Password** Enter the User Name and Password provided by your ISP.

Connect on Demand: Max Idle Time You can configure the Router to cut the Internet connection after it has been inactive for a specified period of time (Max Idle Time). If your Internet connection has been terminated due to inactivity, Connect on Demand enables the Router to automatically re-establish your connection as soon as you attempt to access the Internet again. To use this option, select Connect on Demand. In the Max Idle Time field, enter the number of minutes you want to have elapsed before your Internet connection terminates. The default Max Idle Time is 5 minutes.

**Keep Alive: Redial Period** If you select this option, the Router will periodically check your Internet connection. If you are disconnected, then the Router will automatically re-establish your connection. To use this option, select **Keep Alive**. In the *Redial Period* field, you specify how often you want the Router to check the Internet connection. The default value is **30** seconds.

#### **Heart Beat Signal**

Heart Beat Signal is a service used in Australia only. If you are using a Heart Beat Signal connection, check with your ISP for the necessary setup information.



Internet Connection Type > Heart Beat Signal

**User Name and Password** Enter the User Name and Password provided by your ISP.

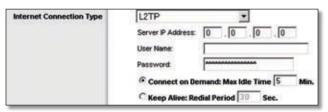
**Heart Beat Server** Enter the IP address of your ISP's Heart Beat server. This is provided by your ISP.

Connect on Demand: Max Idle Time You can configure the Router to cut the Internet connection after it has been inactive for a specified period of time (Max Idle Time). If your Internet connection has been terminated due to inactivity, Connect on Demand enables the Router to automatically re-establish your connection as soon as you attempt to access the Internet again. To use this option, select Connect on Demand. In the Max Idle Time field, enter the number of minutes you want to have elapsed before your Internet connection terminates. The default Max Idle Time is 5 minutes.

**Keep Alive: Redial Period** If you select this option, the Router will periodically check your Internet connection. If you are disconnected, then the Router will automatically re-establish your connection. To use this option, select **Keep Alive**. In the *Redial Period* field, you specify how often you want the Router to check the Internet connection. The default value is **30** seconds.

#### L2TP

L2TP is a service that applies to connections in Israel only.



Internet Connection Type > L2TP

**Server IP Address** Enter the IP address of the L2TP server. This is provided by your ISP.

**User Name and Password** Enter the User Name and Password provided by your ISP.

Connect on Demand: Max Idle Time You can configure the Router to cut the Internet connection after it has been inactive for a specified period of time (Max Idle Time). If your Internet connection has been terminated due to inactivity, Connect on Demand enables the Router to automatically re-establish your connection as soon as you attempt to access the Internet again. To use this option, select Connect on Demand. In the Max Idle Time field,

enter the number of minutes you want to have elapsed before your Internet connection terminates. The default Max Idle Time is **5** minutes.

**Keep Alive: Redial Period** If you select this option, the Router will periodically check your Internet connection. If you are disconnected, then the Router will automatically re-establish your connection. To use this option, select **Keep Alive**. In the *Redial Period* field, you specify how often you want the Router to check the Internet connection. The default Redial Period is **30** seconds.

#### **Optional Settings**

Some of these settings may be required by your ISP. Verify with your ISP before making any changes.



**Optional Settings** 

Host Name and Domain Name These fields allow you to supply a host and domain name for the Router. Some ISPs, usually cable ISPs, require these names as identification. You may have to check with your ISP to see if your broadband Internet service has been configured with a host and domain name. In most cases, leaving these fields blank will work.

MTU MTU is the Maximum Transmission Unit. It specifies the largest packet size permitted for Internet transmission. Select **Enable** if you want to manually enter the largest packet size that is transmitted. To have the Router select the best MTU for your Internet connection, keep the default setting, **Disable**.

**Size** When Manual is selected in the *MTU* field, this option is enabled. Leave this value in the 1200 to 1500 range. The default size depends on the Internet Connection Type:

DHCP, Static IP, or Telstra: 1500

PPPoE: 1492

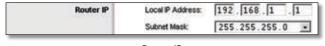
PPTP or L2TP: 1460

# **Network Setup**

The Network Setup section changes the settings on the network connected to the Router's Ethernet ports.

## Router IP

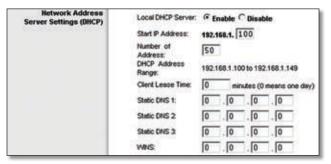
This presents both the Router's IP Address and Subnet Mask as seen by your network.



Router IP

## **Network Address Server Settings (DHCP)**

The settings allow you to configure the Router's Dynamic Host Configuration Protocol (DHCP) server function. The Router can be used as a DHCP server for your network. A DHCP server automatically assigns an IP address to each computer on your network. If you choose to enable the Router's DHCP server option, make sure there is no other DHCP server on your network.



Network Address Server Settings (DHCP)

**Local DHCP Server** DHCP is enabled by factory default. If you already have a DHCP server on your network, or you don't want a DHCP server, then select **Disable** (no other DHCP features will be available).

**Start IP Address** Enter a value for the DHCP server to start with when issuing IP addresses. Because the Router's default IP address is 192.168.1.1, the Start IP Address must be 192.168.1.2 or greater, but smaller than 192.168.1.253. The default is **192.168.1.100**.

**Number of Address** Enter the maximum number of computers that you want the DHCP server to assign IP addresses to. This number cannot be greater than 253. The default is **50**.

**DHCP Address Range** Displayed here is the range of available IP addresses.

Client Lease Time The Client Lease Time is the amount of time a network user will be allowed connection to the Router with their current dynamic IP address. Enter the amount of time, in minutes, that the user will be "leased" this dynamic IP address. After the time is up, the user will be automatically assigned a new dynamic IP address. The default is 0 minutes, which means one day.

**Static DNS 1-3** The Domain Name System (DNS) is how the Internet translates domain or website names into Internet addresses or URLs. Your ISP will provide you with at least one DNS Server IP address. If you wish to use another, enter that IP address in one of these fields. You can enter up to three DNS Server IP addresses here. The Router will use these for quicker access to functioning DNS servers.

**WINS** The Windows Internet Naming Service (WINS) manages each PC's interaction with the Internet. If you use a WINS server, enter that server's IP address here. Otherwise, leave this blank.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes.

# Setup > DDNS

The Router offers a Dynamic Domain Name System (DDNS) feature. DDNS lets you assign a fixed host and domain name to a dynamic Internet IP address. It is useful when you are hosting your own website, FTP server, or other server behind the Router.

Before you can use this feature, you need to sign up for DDNS service with a DDNS service provider, www.dyndns.org or www.TZO.com. If you do not want to use this feature, keep the default setting, **Disabled**.

#### **DDNS**

### **DDNS Service**

If your DDNS service is provided by DynDNS.org, then select **DynDNS.org** from the drop-down menu. If your DDNS service is provided by TZO, then select **TZO**. The features available on the *DDNS* screen will vary, depending on which DDNS service provider you use.

# DynDNS.org



Setup > DDNS > DynDNS.org

**User Name** Enter the User Name for your DDNS account.

**Password** Enter the Password for your DDNS account.

**Host Name** The is the DDNS URL assigned by the DDNS service.

**Internet IP Address** The Router's Internet IP address is displayed here. Because it is dynamic, it will change.

**Status** The status of the DDNS service connection is displayed here.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes.

#### TZO.com



Setup > DDNS > TZO

**E-mail Address, TZO Password Key, and Domain Name** Enter the settings of the account you set up with TZO.

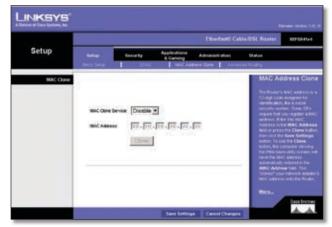
**Internet IP Address** The Router's Internet IP address is displayed here. Because it is dynamic, it will change.

**Status** The status of the DDNS service connection is displayed here.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes.

# **Setup > MAC Address Clone**

A MAC address is a 12-digit code assigned to a unique piece of hardware for identification. Some ISPs will require you to register a MAC address in order to access the Internet. If you do not wish to re-register the MAC address with your ISP, you may assign the MAC address you have currently registered with your ISP to the Router with the MAC Address Clone feature.



Setup > MAC Address Clone

### **MAC Clone**

**MAC Clone Service** To have the MAC address cloned, select **Enable**.

**MAC Address** Enter the MAC address registered with your ISP here.

**Clone** Click this button to clone the MAC address of the computer you are using.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes.

# **Setup > Advanced Routing**

This screen is used to set up the Router's advanced functions. Dynamic Routing automatically adjusts how packets travel on your network. Static Routing sets up a fixed route to another network destination.



Setup > Advanced Routing

# **Advanced Routing**

### NAT

**Enable/Disable** If this Router is hosting your network's connection to the Internet, keep the default, **Enable**. If another router exists on your network, select **Disable**. When the NAT setting is disabled, the Dynamic Routing feature can be enabled.

#### Dynamic Routing (RIP)

**Enable/Disable** This feature enables the Router to automatically adjust to physical changes in the network's layout and exchange routing tables with the other router (s). The Router determines the network packets' route based on the fewest number of hops between the source and the destination. When the NAT setting is enabled, the Dynamic Routing feature is automatically disabled. When

the NAT setting is disabled, this feature is available. Select **Enable** to use the Dynamic Routing feature.

**Transmit RIP Version** To use dynamic routing for transmission of network data, select the protocol you want: **RIP1**, **RIP1-Compatible**, or **RIP2**.

**Receive RIP Version** To use dynamic routing for reception of network data, select the protocol you want, **RIP1** or **RIP2**.

### **Static Routing**

A static route is a pre-determined pathway that network information must travel to reach a specific host or network. Enter the information described below to set up a new static route.

**Select Entry** To set up a static route between the Router and another network, select a number from the dropdown list. Click **Delete Entry** to delete a static route.

**Destination IP Address** Enter the IP address of the remote network or host to which you want to assign a static route.

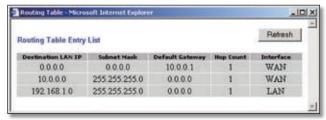
**Subnet Mask** Enter the subnet mask. This determines which portion of a Destination IP Address is the network portion, and which portion is the host portion.

**Gateway** Enter the IP address of the gateway device that allows for contact between the Router and the remote network or host.

**Hop Count** Enter the maximum number of steps between network nodes that data packets will travel. A node is any device on the network, such as a computer, print server, or router.

**Interface** Select the appropriate interface. This tells you whether the Destination IP Address is on the **LAN** (Local Area Network) or the **Internet**.

Click **Show Routing Table** to view the static routes you have already set up.



Advanced Routing > Routing Table

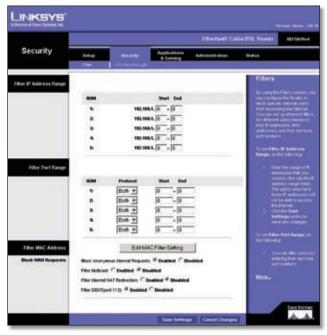
#### **Routing Table**

For each route, the Destination LAN IP address, Subnet Mask, Gateway, Hop Count, and Interface are displayed. Click **Refresh** to update the information.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes.

# **Security** > **Filter**

The *Filter* screen is used to set up filters to block specific internal users from accessing the Internet and enhance your network's security.



Security > Filter

# **Filter IP Address Range**

You can create up to five different IP Address Range filters. Users who have filtered IP addresses will not be able to access the Internet at all. If you only want to filter one IP address instead of a range of IP addresses, enter the same value into both fields. For instance, if you wish to filter the PC with the IP address of 192.168.1.5, enter 5 into both fields on one line: 192.168.1.5 ~ 192.168.1.5.

**Start** Enter the starting IP address of the range you wish to filter.

**End** Enter the ending IP address of the range you wish to filter.

# **Filter Port Range**

You can create up to five different Port Range filters. Users connected to the Router will no longer be able to access any port number listed here.

**Protocol** Select the protocol you want to filter, **TCP**, **UDP**, or **Both**.

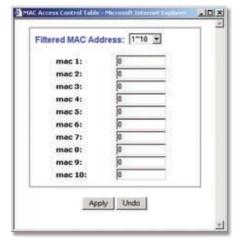
**Start** Enter the starting port number of the range you wish to filter.

**End** Enter the ending port number of the range you wish to filter.

## **Filter MAC Address**

This feature blocks computers with specific MAC addresses from going out to the Internet.

**Edit MAC Filter Setting** To set the MAC filter, click **Edit MAC Filter Setting**.



Filter > MAC Access Control Table

Use the MAC Access Control Table to select the MAC addresses you want to filter.

- Filtered MAC Address Select the range of MAC address entries.
- mac 1-10 Enter the MAC address.

Click **Apply** before closing the window. To cancel changes, click **Undo**.

### **Block WAN Requests**

Use these features to enhance your network's security and filter multicasting.

**Block Anonymous Internet Requests** This feature makes it more difficult for outside users to work their way into your network. This feature is enabled by default. Select **Disabled** to allow anonymous Internet requests.

**Filter Multicast** Multicasting allows for multiple transmissions to specific recipients at the same time. If multicasting is permitted, then the Router will allow IP multicast packets to be forwarded to the appropriate computers. Select **Enabled** to filter multicasting. This feature is disabled by default.

**Filter Internet NAT Redirection** This feature uses port forwarding to block access to local servers from local networked computers. Select **Enabled** to filter Internet NAT redirection. This feature is disabled by default.

**Filter IDENT (Port 113)** This feature keeps port 113 from being scanned by devices outside of your local network. This feature is enabled by default. Select **Disabled** to allow port 113 to be scanned.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes.

# Security > VPN Passthrough

The VPN Passthrough screen allows you to enable VPN tunnels using IPSec, PPPoE, or PPTP protocols to pass through the Router's firewall.



Security > VPN Passthrough

# **VPN Passthrough**

**IPSec Passthrough** Internet Protocol Security (IPSec) is a suite of protocols used to implement secure exchange of packets at the IP layer. To allow IPSec tunnels to pass through the Router, keep the default, **Enabled**.

PPPoE Passthrough Point-to-Point over Ethernet (PPPoE) Passthrough allows your computer(s) to use the PPPoE client software provided by your ISP. Some ISPs may request that you use this feature on the Router. To allow PPPoE Passthrough, keep the default, **Enabled**.

**PPTP Passthrough** Point-to-Point Tunneling Protocol (PPTP) allows the Point-to-Point Protocol (PPP) to be tunneled through an IP network. To allow PPTP tunnels to pass through the Router, keep the default, **Enabled**.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes.

# Applications and Gaming > Port Range Forwarding

The Port Range Forwarding screen allows you to set up public services on your network, such as web servers, ftp servers, e-mail servers, or other specialized Internet applications. (Specialized Internet applications are any applications that use Internet access to perform functions such as videoconferencing or online gaming. Some Internet applications may not require any forwarding.)

When users send these types of requests to your network via the Internet, the Router will forward those requests to the appropriate servers (computers). Before using forwarding, you should assign static IP addresses to the designated servers

If you need to forward all ports to one computer, click the **DMZ** tab.



Applications and Gaming > Port Range Forwarding

# **Port Range Forwarding**

To forward a port, enter the information on each line for the criteria required.

**Application** In this field, enter the name you wish to give the application. Each name can be up to 12 characters.

**Start and End** Enter the number or range of port(s) used by the server or Internet applications. Check with the Internet application documentation for more information.

**Protocol** Select the protocol used for this application, either **TCP** or **UDP**, or **Both**.

**IP Address** For each application, enter the IP address of the PC running the specific application.

**Enabled** Select **Enabled** to enable port forwarding for the applications you have defined.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes.

# Applications & Gaming > Port Triggering

The *Port Triggering* screen allows the Router to watch outgoing data for specific port numbers. The IP address of the computer that sends the matching data is remembered by the Router, so that when the requested data returns through the Router, the data is pulled back to the proper computer by way of IP address and port mapping rules.



Applications and Gaming > Port Triggering

# **Port Triggering**

**Application** Enter the application name of the trigger.

# **Triggered Range**

**Start Port and End Port** For each application, enter the starting and ending port numbers of the triggered port number range. Check with the Internet application documentation for the port number(s) needed.

### **Forwarded Range**

**Start Port and End Port** For each application, enter the starting and ending port numbers of the forwarded port number range. Check with the Internet application documentation for the port number(s) needed.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes.

# Applications and Gaming > UPnP Forwarding

The *UPnP Forwarding* screen displays preset application settings as well as options to customize port services for other applications.



Applications and Gaming > UPnP Forwarding

# **UPnP Forwarding**

**Application** Ten applications are preset. For custom applications, enter the name of your application in one of the available fields.

The preset applications are among the most widely used Internet applications. They include the following:

FTP (File Transfer Protocol) - A protocol used to transfer files over a TCP/IP network (Internet, UNIX, etc.). For example, after developing the HTML pages for a website on a local machine, they are typically uploaded to the web server using FTP.

Telnet - A terminal emulation protocol commonly used on Internet and TCP/IP-based networks. It allows a user at a terminal or computer to log onto a remote device and run a program.

SMTP (Simple Mail Transfer Protocol) - The standard email protocol on the Internet. It is a TCP/IP protocol that defines the message format and the message transfer agent (MTA), which stores and forwards the mail.

DNS (Domain Name System) - The way that Internet domain names are located and translated into IP addresses. A domain name is a meaningful and easy-to-remember "handle" for an Internet address.

TFTP (Trivial File Transfer Protocol) - A version of the TCP/IP FTP protocol that has no directory or password capability.

Finger - A UNIX command widely used on the Internet to find out information about a particular user, such as a telephone number, whether the user is currently logged on, and the last time the user was logged on. The person being "fingered" must have placed his or her profile on the system in order for the information to be available.

Fingering requires entering the full user@domain address.

HTTP (HyperTextTransport Protocol) - The communications protocol used to connect to servers on the World Wide Web. Its primary function is to establish a connection with a web server and transmit HTML pages to the client web browser.

POP3 (Post Office Protocol 3) - A standard mail server commonly used on the Internet. It provides a message store that holds incoming e-mail until users log on and download it. POP3 is a simple system with little selectivity. All pending messages and attachments are downloaded at the same time. POP3 uses the SMTP messaging protocol.

NNTP (Network News Transfer Protocol) - The protocol used to connect to Usenet groups on the Internet. Usenet newsreaders support the NNTP protocol.

SNMP (Simple Network Management Protocol) - A widely used network monitoring and control protocol. Data is passed from SNMP agents, which are hardware and/or software processes reporting activity in each network device (hub, router, bridge, etc.), to the workstation console used to oversee the network. The agents return information contained in a MIB (Management Information Base), which is a data structure that defines what is obtainable from the device and what can be controlled (turned off, on, etc.).

**Ext. Port.** Enter the number of the external port used by the server in the Ext. Port column. Check with the Internet application documentation for more information.

**TCP or UDP** Select the protocol **UDP** or **TCP** for each application. You cannot select both protocols.

**Int. Port** Enter the number of the internal port used by the server in the Int. Port column. Check with the Internet application software documentation for more information.

**IP Address** Enter the IP address of the server that you want the Internet users to be able to access.

**Enabled** Select **Enabled** to enable the service you have defined.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes.

# Applications and Gaming > DMZ

The DMZ feature allows one network computer to be exposed to the Internet for use of a special-purpose service such as Internet gaming or videoconferencing. DMZ hosting forwards all the ports at the same time to one PC. The Port Range Forwarding feature is more secure because it only opens the ports you want to have opened, while DMZ hosting opens all the ports of one computer, exposing the computer to the Internet.



Applications and Gaming > DMZ

## **DMZ**

Any PC whose port is being forwarded must have its DHCP client function disabled and should have a new static IP address assigned to it because its IP address may change when using the DHCP function.

**DMZ** To disable DMZ hosting, keep the default, **Disable**. To expose one PC, select **Enable**. Then configure the following setting:

**DMZ Host IP Address** Enter the IP address of the computer you want to expose.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes.

# **Applications and Gaming > QoS**

Quality of Service (QoS) ensures better service to high-priority types of network traffic, which may involve demanding, real-time applications, such as videoconferencing.



Applications and Gaming > QoS

## QoS

**Enable/Disable** To limit outgoing bandwidth for the QoS policies in use, select **Enable**. Otherwise, keep the default, **Disable**.

**Upstream Bandwidth** Select the bandwidth to be used from the drop-down menu. This setting allows you to limit the outgoing bandwidth for the QoS policies in use, so you can control how much bandwidth a particular application is allowed to use.

There are three types of QoS available: Device Priority, Ethernet Port Priority, and Application Priority.

#### **Device Priority**

**Device Name** Enter the name of your network device.

**Priority** Select the appropriate priority level.

MAC Address Enter the MAC address of the device.

## **Ethernet Port Priority**

Ethernet Port Priority QoS allows you to prioritize performance for four of the Router's ports, LAN Ports 1-4. It does not require support from your ISP because the prioritized ports are LAN ports going out to your network.

**Priority** For each of these ports, select **High** or **Low**.

**Flow Control** If you want the Router to control the transmission of data between network devices, keep the default, **Enable**. To disable this feature, select **Disable**. The Router's other four ports will be automatically assigned low priority.

**Incoming Rate Limit** This feature limits the incoming bandwidth. To use this feature, select **8M**, **4M**, **2M**, **1M**, **512K**, **256K**, or **128K** (M stands for Mbps, while K stands for kbps). If you do not want to use this feature, keep the default. **Disable**.

### **Application Priority**

Application Priority QoS manages information as it is transmitted and received. Depending on the settings of the QoS screen, this feature will assign information a high or low priority for the five preset applications and three additional applications that you specify.

The preset applications are among the most widely used Internet applications. They include the following:

FTP (File Transfer Protocol) - A protocol used to transfer files over a TCP/IP network (Internet, UNIX, etc.). For example, after developing the HTML pages for a website on a local machine, they are typically uploaded to the web server using FTP.

HTTP (HyperTextTransport Protocol) - The communications protocol used to connect to servers on the World Wide Web. Its primary function is to establish a connection with a web server and transmit HTML pages to the client web browser.

Telnet - A terminal emulation protocol commonly used on Internet and TCP/IP-based networks. It allows a user at a terminal or computer to log onto a remote device and run a program.

SMTP (Simple Mail Transfer Protocol) - The standard e-mail protocol on the Internet. It is a TCP/IP protocol that defines the message format and the message transfer agent (MTA), which stores and forwards the mail.

POP3 (Post Office Protocol 3) - A standard mail server commonly used on the Internet. It provides a message store that holds incoming e-mail until users log on and download it. POP3 is a simple system with little selectivity. All pending messages and attachments are downloaded at the same time. POP3 uses the SMTP messaging protocol.

**Application Name** Enter the name of an application you specify.

**Priority** For each application, select **High** or **Low**.

**Specific Port#** Enter the port number of each application you specify.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes.

# Administration > Management

The Management screen allows the network's administrator to manage specific Router functions for access and security.



Administration > Management

## **Router Access**

#### Local Router Access

To ensure the Router's security, you will be asked for your password when you access the Router's web-based utility. The default is **admin**.

**Router Password** Enter a new password for the Router.

**Re-enter to confirm** Enter the password again to confirm.

### **Remote Router Access**

**Remote Upgrade** If you want to be able to upgrade the Router remotely, from outside the local network, select **Enabled**. (You must have the Remote Administration feature enabled as well.) Otherwise, keep the default, **Disabled**.

**Remote Administration** To permit remote access of the Router, from outside the local network, select **Enabled**. Otherwise, keep the default, **Disabled**.

**Administration Port** Enter the port number that will be open to outside access.



**NOTE:** When you are in a remote location and wish to manage the Router, enter **http://<Internet\_IP\_address>:port**, depending on whether you use HTTP or HTTPS. Enter the Router's specific Internet IP address in place of <Internet\_IP\_address>, and enter the Administration Port number in place of the word port.

### **UPnP**

Universal Plug and Play (UPnP) allows Windows Me and XP to automatically configure the Router for various Internet applications, such as gaming and videoconferencing.

**UPnP** If you want to use UPnP, keep the default setting, **Enabled**. Otherwise, select **Disabled**.

**Allow Users to Make Configuration Changes** Keep the default, **Enabled**, if you want to be able to make manual changes to the Router while using the UPnP feature. Otherwise, select **Disabled**.

**Allow Users to Disable Internet Access** Keep the default, **Enabled**, if you want to be able to prohibit any and all Internet connections. Otherwise, select **Disabled**.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes.

# Administration > Log

The Router can keep logs of all traffic for your Internet connection.



Administration > Log

## Log

**No.** To disable the Log function, keep the default setting, **No.** To monitor traffic between the network and the Internet, select **Yes**. With logging enabled, you can choose to view temporary logs or keep a permanent record using the Logviewer software.

Logviewer IP Address For a permanent record of these logs, the Logviewer software must be used. Download this software from the Linksys website, www.linksys.com. The Logviewer software saves all incoming and outgoing activity in a permanent file on your computer's hard drive. Enter the fixed IP address of the computer running the Logviewer software. The Router will now send updated logs to that computer.

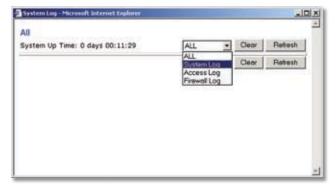
**Incoming Log** Click this button to view a temporary log of the Source IP addresses and Destination Port Numbers for all the incoming Internet traffic. Click **Refresh** to update the log.

**Outgoing Log** Click this button to view a temporary log of all the URLs and IP addresses of Internet sites that users on your network have accessed. The LAN IP address,

Destination URL/IP, and Service/Port Number for each site are listed. Click **Refresh** to update the log.

**View Log** Click this button to view a log of all activities and to access a drop-down menu of various logs to view.

On the *All* screen, select the log you wish to view: **All**, **System Log**, or **Access Log**.



Log > View Log

- All You see a log of all activities, a combination of the System and Access Logs.
- System Log This log displays a list of cold and warm starts, web login successes and failures, and packet filtering policies.
- Access Log This log shows all data traffic.
   Click Clear to clear a log. Click Refresh to update a

Click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes.

# **Administration > Factory Defaults**

log.

The Administration > Factory Defaults screen allows you to restore the Router's configuration to its factory default settings.



Administration > Factory Defaults



**NOTE:** Do not restore the factory defaults unless you are having difficulties with the Router and have exhausted all other troubleshooting measures. Once the Router is reset, you will have to re-enter all of your configuration settings.

# **Factory Defaults**

**Restore Factory Defaults** To reset the Router's settings to the default values, select **Yes** and click **Save Settings**. Then follow the on-screen instructions. Any settings you have saved will be lost when the default settings are restored.

# Administration > Firmware Upgrade

The Firmware Upgrade screen allows you to upgrade the Router's firmware. Do not upgrade the firmware unless you are experiencing problems with the Router or the new firmware has a feature you want to use.



Administration > Firmware Upgrade



**NOTE:** The Router may lose the settings you have customized. Before you upgrade its firmware, write down all of your custom settings. After you upgrade its firmware, you will have to re-enter all of your configuration settings.

# **Upgrade Firmware**

Before upgrading the firmware, download the Router's firmware upgrade file from the Linksys website, www.linksys.com. Then extract the file.

**Please select a file to upgrade** Click **Browse** and select the extracted firmware upgrade file.

**Upgrade** After you have selected the appropriate file, click this button, and follow the on-screen instructions.

# Status > Router

The *Router* screen displays information about the Router and its current settings.



Status > Router

## **Information**

**Firmware Version** This is the version number of the Router's current firmware.

**MAC Address** This is the Router's MAC address, as seen by your ISP.

### **Status**

This section shows the current network information stored in the Router. The information varies depending on the Internet connection type selected on the *Basic Setup* screen.

Click **Refresh** to update the on-screen information.

# Status > Local Network

The Local Network screen displays information about the local, wired network.



Status > Local Network

### **Local Network**

**Local MAC Address** The MAC address of the Router's local, wired interface is displayed here.

**IP Address** This shows the Router's IP address, as it appears on your local network.

**Subnet Mask** This shows the subnet mask of the Router.

**DHCP Server** The status of the Router's DHCP server function is displayed here.

**DHCP Clients Table** Click this button to view a list of PCs that are using the Router as a DHCP server.



**DHCP Clients Table** 

#### **DHCP Client Table**

The DHCP Client Table lists computers and other devices that have been assigned IP addresses by the Router. The DHCP Server IP Address is the IP address of the Router. The table lists the Client Hostname, IP Address, MAC Address, and Interface for each DHCP client. To remove a DHCP client, select the client and click **Delete**. To retrieve the most up-to-date information, click **Refresh**.

 ${\sf Click} \ \textbf{Refresh} \ \hbox{to update the on-screen information}.$ 

# Appendix A: Troubleshooting

#### Your computer cannot connect to the Internet.

Follow these instructions until your computer can connect to the Internet:

- Make sure that the Router is powered on. The Power LED should be green and not flashing.
- If the Power LED is flashing, then power off all of your network devices, including the modem, Router, and computers. Then power on each device in the following order:
  - 1. Cable or DSL modem
  - 2. Router
  - 3. Computer
- Check the cable connections. The computer should be connected to one of the ports numbered 1-4 on the Router, and the modem must be connected to the Internet port on the Router.

#### The modem does not have an Ethernet port.

The modem is a dial-up modem for traditional dial-up service. To use the Router, you need a cable/DSL modem and high-speed Internet connection.

# You cannot use the DSL service to connect manually to the Internet.

After you have installed the Router, it will automatically connect to your Internet Service Provider (ISP), so you no longer need to connect manually.

# The DSL telephone line does not fit into the Router's Internet port.

The Router does not replace your modem. You still need your DSL modem in order to use the Router. Connect the telephone line to the DSL modem, insert the setup CD into your computer, and then follow the on-screen instructions.

# When you double-click the web browser, you are prompted for a username and password. If you want to get rid of the prompt, follow these instructions.

Launch the web browser and perform the following steps (these steps are specific to Internet Explorer but are similar for other browsers):

- 1. Select **Tools** > **Internet Options**.
- 2. Click the **Connections** tab.
- 3. Select Never dial a connection.
- 4. Click OK.

# The Router does not have a coaxial port for the cable connection.

The Router does not replace your modem. You still need your cable modem in order to use the Router. Connect your cable connection to the cable modem, insert the setup CD into your computer, and then follow the on-screen instructions.

### You need to modify the settings on the Router.

Open the web browser (for example, Internet Explorer or Firefox), and enter the Router's IP address in the address field (the default IP address is **192.168.1.1**). When prompted, leave the *User name* field blank and enter the password to the Router (the default is **admin**). Click the appropriate tab to change the settings.



**WEB:** If your questions are not addressed here, refer to the Linksys website, **www.linksys.com**.

# Appendix B: Specifications

Model BEFSR41

Standards IEEE 802.3 (10BaseT),

IEEE 802.3u (100BaseTX)

Ports One 10/100 RJ-45 Port for

**Broadband Modem** 

Four 10/100 RJ-45 Switched Ports

Button Reset

Cabling Type Ethernet Category 5
LEDs Power, Ethernet, Internet

OS Support Windows 98SE/Me/2000/XP/Vista

Network Protocols TCP/IP

#### **Environmental**

Dimensions 7.31" x 6.16" x 1.88"

(186 x 154 x 48 mm)

Unit Weight 11.40 oz. (320 g)
Power External, 12V DC, 1A

Certifications FCC, CE

Operating Temp. 0 to  $40^{\circ}$ C (32 to  $104^{\circ}$ F) Storage Temp. -20 to  $70^{\circ}$ C (-4 to  $158^{\circ}$ F)

Operating Humidity 10% to 85%, Noncondensing Storage Humidity 5% to 90%, Noncondensing

Specifications are subject to change without notice.

# **Appendix C: Warranty Information**

# **Limited Warranty**

Linksys warrants this Linksys hardware product against defects in materials and workmanship under normal use for the Warranty Period, which begins on the date of purchase by the original end-user purchaser and lasts for the period specified below:

- One (1) year for new product
- Ninety (90) days for refurbished product

This limited warranty is non-transferable and extends only to the original end-user purchaser. Your exclusive remedy and Linksys' entire liability under this limited warranty will be for Linksys, at its option, to (a) repair the product with new or refurbished parts, (b) replace the product with a reasonably available equivalent new or refurbished Linksys product, or (c) refund the purchase price of the product less any rebates. Any repaired or replacement products will be warranted for the remainder of the original Warranty Period or thirty (30) days, whichever is longer. All products and parts that are replaced become the property of Linksys.

### **Exclusions and Limitations**

This limited warranty does not apply if: (a) the product assembly seal has been removed or damaged, (b) the product has been altered or modified, except by Linksys, (c) the product damage was caused by use with non-Linksys products, (d) the product has not been installed, operated, repaired, or maintained in accordance with instructions supplied by Linksys, (e) the product has been subjected to abnormal physical or electrical stress, misuse, negligence, or accident, (f) the serial number on the Product has been altered, defaced, or removed, or (g) the product is supplied or licensed for beta, evaluation, testing or demonstration purposes for which Linksys does not charge a purchase price or license fee.

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service offerings. This limited warranty shall not apply to such third party software or service offerings. This limited warranty does not guarantee any continued availability of a third party's service for which this product's use or operation may require.

TO THE EXTENT NOT PROHIBITED BY LAW, ALL IMPLIED WARRANTIES AND CONDITIONS OF MERCHANTABILITY, SATISFACTORY QUALITY OR FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED TO THE DURATION OF THE WARRANTY PERIOD. ALL OTHER EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS AND WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF NON-INFRINGEMENT, ARE DISCLAIMED. Some jurisdictions do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. This limited warranty gives you specific legal rights, and you may also have other rights which vary by jurisdiction.

TO THE EXTENT NOT PROHIBITED BY LAW, IN NO EVENT WILL LINKSYS BE LIABLE FOR ANY LOST DATA, REVENUE OR PROFIT, OR FOR SPECIAL, INDIRECT, CONSEQUENTIAL, INCIDENTAL OR PUNITIVE DAMAGES, REGARDLESS OF THE THEORY OF LIABILITY (INCLUDING NEGLIGENCE), ARISING OUT OF OR RELATED TO THE USE OF OR INABILITY TO USE THE PRODUCT (INCLUDING ANY SOFTWARE), EVEN IF LINKSYS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT WILL LINKSYS' LIABILITY EXCEED THE AMOUNT PAID BY YOU FOR THE PRODUCT. The foregoing limitations will apply even if any warranty or remedy provided under this limited warranty fails of its essential purpose. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

# **Obtaining Warranty Service**

If you have a question about your product or experience a problem with it, please go to www.linksys.com/support where you will find a variety of online support tools and information to assist you with your product. If the product proves defective during the Warranty Period, contact Linksys Technical Support for instructions on how to obtain warranty service. The telephone number for Linksys Technical Support in your area can be found in the product User Guide and at www.linksys.com. Have your product serial number and proof of purchase on hand when calling. A DATED PROOF OF ORIGINAL PURCHASE IS REQUIRED TO PROCESS WARRANTY CLAIMS. If you are requested to return your product, you will be given a Return Materials Authorization (RMA) number. You are responsible for properly packaging and shipping your product to Linksys at your cost and risk. You must include the RMA number and a copy of your dated proof of original purchase when returning your product. Products received without a RMA number and dated proof of original purchase will be

rejected. Do not include any other items with the product you are returning to Linksys. Defective product covered by this limited warranty will be repaired or replaced and returned to you without charge. Customers outside of the United States of America and Canada are responsible for all shipping and handling charges, custom duties, VAT and other associated taxes and charges. Repairs or replacements not covered under this limited warranty will be subject to charge at Linksys' then-current rates.

# **Technical Support**

This limited warranty is neither a service nor a support contract. Information about Linksys' current technical support offerings and policies (including any fees for support services) can be found at:

### www.linksys.com/support.

This limited warranty is governed by the laws of the jurisdiction in which the Product was purchased by you.

Please direct all inquiries to: Linksys, P.O. Box 18558, Irvine, CA 92623.

# Appendix D: Regulatory Information

# **FCC Statement**

This product has been tested and complies with the specifications for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used according to the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which is found by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment or devices
- Connect the equipment to an outlet other than the receiver's
- Consult a dealer or an experienced radio/TV technician for assistance

# **Safety Notices**

- Caution: To reduce the risk of fire, use only No.26 AWG or larger telecommunication line cord.
- Do not use this product near water, for example, in a wet basement or near a swimming pool.
- Avoid using this product during an electrical storm.
   There may be a remote risk of electric shock from lightning.



**WARNING:** This product contains lead, known to the State of California to cause cancer, and birth defects or other reproductive harm. Wash hands after handling.

# **Industry Canada Statement**

This Class B digital apparatus complies with Canadian ICES-003.

Operation is subject to the following two conditions:

- 1. This device may not cause interference and
- This device must accept any interference, including interference that may cause undesired operation of the device.

# Avis d'Industrie Canada

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Le fonctionnement est soumis aux conditions suivantes :

- 1. Ce périphérique ne doit pas causer d'interférences;
- 2. Ce périphérique doit accepter toutes les interférences reçues, y compris celles qui risquent d'entraîner un fonctionnement indésirable.

# User Information for Consumer Products Covered by EU Directive 2002/96/EC on Waste Electric and Electronic Equipment (WEEE)

This document contains important information for users with regards to the proper disposal and recycling of Linksys products. Consumers are required to comply with this notice for all electronic products bearing the following symbol:



# **English - Environmental Information for Customers in the European Union**

European Directive 2002/96/EC requires that the equipment bearing this symbol 

on the product and/or its packaging must not be disposed of with unsorted municipal waste. The symbol indicates that this product should be disposed of separately from regular household waste streams. It is your responsibility to dispose of this and other electric and electronic equipment via designated collection facilities appointed by the government or local authorities. Correct disposal and recycling will help prevent potential negative consequences to the environment and human health. For more detailed information about the disposal of your old equipment, please contact your local authorities, waste disposal service, or the shop where you purchased the product.

## Български (Bulgarian) - Информация относно опазването на околната среда за потребители в Европейския съюз

Европейска директива 2002/96/ЕС изисква уредите, носещи този символ № върху изделието и/или опаковката му, да не се изхвърля т с несортирани битови отпадъци. Символът обозначава, че изделието трябва да се изхвърля отделно от сметосъбирането на обикновените битови отпадъци. Ваша е отговорността този и другите електрически и електронни уреди да се изхвърлят в предварително определени от държавните или общински органи специализирани пунктове за събиране. Правилното изхвърляне и рециклиране ще спомогнат да се предотвратят евентуални вредни за околната среда и здравето на населението последствия. За по-подробна информация относно изхвърлянето на вашите стари уреди се обърнете към местните власти, службите за сметосъбиране или магазина, от който сте закупили уреда.

# Čeština (Czech) - Informace o ochraně životního prostředí pro zákazníky v zemích Evropské unie

Evropská směrnice 2002/96/ES zakazuje, aby zařízení označené tímto symbolem ¾ na produktu anebo na obalu bylo likvidováno s netříděným komunálním odpadem. Tento symbol udává, že daný produkt musí být likvidován odděleně od běžného komunálního odpadu. Odpovídáte za likvidaci tohoto produktu a dalších elektrických a elektronických zařízení prostřednictvím určených sběrných míst stanovených vládou nebo místními úřady. Správná likvidace a recyklace pomáhá předcházet potenciálním negativním dopadům na životní prostředí a lidské zdraví. Podrobnější informace o likvidaci starého vybavení si laskavě vyžádejte od místních úřadů, podniku zabývajícího se likvidací komunálních odpadů nebo obchodu, kde jste produkt zakoupili.

#### Dansk (Danish) - Miljøinformation for kunder i EU

EU-direktiv 2002/96/EF kræver, at udstyr der bærer dette symbol på produktet og/eller emballagen ikke må bortskaffes som usorteret kommunalt affald. Symbolet betyder, at dette produkt skal bortskaffes adskilt fra det almindelige husholdningsaffald. Det er dit ansvar at bortskaffe dette og andet elektrisk og elektronisk udstyr via bestemte indsamlingssteder udpeget af staten eller de lokale myndigheder. Korrekt bortskaffelse og genvinding vil hjælpe med til at undgå mulige skader for miljøet og menneskers sundhed. Kontakt venligst de lokale myndigheder, renovationstjenesten eller den butik, hvor du har købt produktet, angående mere detaljeret information om bortskaffelse af dit gamle udstyr.

# Deutsch (German) - Umweltinformation für Kunden innerhalb der Europäischen Union

Die Europäische Richtlinie 2002/96/EC verlangt, dass technische Ausrüstung, die direkt am Gerät und/oder an der Verpackung mit diesem Symbol versehen ist X, nicht zusammen mit unsortiertem Gemeindeabfall entsorgt werden darf. Das Symbol weist darauf hin, dass das Produkt von regulärem Haushaltmüll getrennt entsorgt werden sollte. Es liegt in Ihrer Verantwortung, dieses Gerät und andere elektrische und elektronische Geräte über die dafür zuständigen und von der Regierung oder örtlichen Behörden dazu bestimmten Sammelstellen zu entsorgen. Ordnungsgemäßes Entsorgen und Recyceln trägt dazu bei, potentielle negative Folgen für Umwelt und die menschliche Gesundheit zu vermeiden. Wenn Sie weitere Informationen zur Entsorgung Ihrer Altgeräte benötigen, wenden Sie sich bitte an die örtlichen Behörden oder städtischen Entsorgungsdienste oder an den Händler, bei dem Sie das Produkt erworben haben.

# Eesti (Estonian) - Keskkonnaalane informatsioon Euroopa Liidus asuvatele klientidele

Euroopa Liidu direktiivi 2002/96/EÜ nõuete kohaselt on seadmeid, millel on tootel või pakendil käesolev sümbol 🕱, keelatud kõrvaldada koos sorteerimata olmejäätmetega. See sümbol näitab, et toode tuleks kõrvaldada eraldi tavalistest olmejäätmevoogudest. Olete kohustatud kõrvaldama käesoleva ja ka muud elektri- ja elektroonikaseadmed riigi või kohalike ametiasutuste poolt ette nähtud kogumispunktide kaudu. Seadmete korrektne kõrvaldamine ja ringlussevõtt aitab vältida võimalikke negatiivseid tagajärgi keskkonnale ning inimeste tervisele. Vanade seadmete kõrvaldamise kohta täpsema informatsiooni saamiseks võtke palun ühendust kohalike ametiasutustega, jäätmekäitlusfirmaga või kauplusega, kust te toote ostsite.

# Español (Spanish) - Información medioambiental para clientes de la Unión Europea

La Directiva 2002/96/CE de la UE exige que los equipos que lleven este símbolo ¾ en el propio aparato y/o en su embalaje no deben eliminarse junto con otros residuos urbanos no seleccionados. El símbolo indica que el producto en cuestión debe separarse de los residuos domésticos convencionales con vistas a su eliminación. Es responsabilidad suya desechar este y cualesquiera otros aparatos eléctricos y electrónicos a través de los puntos de recogida que ponen a su disposición el gobierno y las autoridades locales. Al desechar y reciclar correctamente estos aparatos estará contribuyendo a evitar posibles consecuencias negativas para el medio ambiente y la salud de las personas. Si desea obtener información más detallada sobre la eliminación segura de su aparato usado, consulte a las autoridades locales, al servicio de recogida y eliminación de residuos de su zona o pregunte en la tienda donde adquirió el producto.

# Ελληνικά (Greek) - Στοιχεία περιβαλλοντικής προστασίας για πελάτες εντός της Ευρωπαϊκής Ένωσης

Σύμφωνα μετην Κοινοτική Οδηγία 2002/96/ΕC, ο εξοπλισμός που φέρει αυτό το σύμβολο Σ στο προϊόν ή/και τη συσκευασία του δεν πρέπει να απορρίπτεται μαζί με τα μη διαχωρισμένα αστικά απορρίμματα. Το σύμβολο υποδεικνύει ότι αυτό το προϊόν θα πρέπει να απορρίπτεται ξεχωριστά από τα συνήθη οικιακά απορρίμματα. Είστε υπεύθυνος για την απόρριψη του παρόντος και άλλου ηλεκτρικού και ηλεκτρονικού εξοπλισμού μέσω των καθορισμένων εγκαταστάσεων συγκέντρωσης απορριμμάτων, οι οποίες ορίζονται από το κράτος ή τις αρμόδιες τοπικές αρχές. Η σωστή απόρριψη και ανακύκλωση συμβάλλει στην πρόληψη ενδεχόμενων αρνητικών επιπτώσεων στο περιβάλλον και την υγεία. Για περισσότερες πληροφορίες σχετικά με την απόρριψη του παλαιού σας εξοπλισμού, επικοινωνήστε με τις τοπικές αρχές, τις υπηρεσίες αποκομιδής απορριμμάτων ή το κατάστημα από το οποίο αγοράσατε το προϊόν.

# Français (French) - Informations environnementales pour les clients de l'Union européenne

La directive européenne 2002/96/CE exige que l'équipement sur lequel est apposé ce symbole sur le produit et/ou son emballage ne soit pas jeté avec les autres ordures ménagères. Ce symbole indique que le produit doit être éliminé dans un circuit distinct de celui pour les déchets des ménages. Il est de votre responsabilité de jeter ce matériel ainsi que tout autre matériel électrique ou électronique par les moyens de collecte indiqués par le gouvernement et les pouvoirs publics des collectivités territoriales. L'élimination et le recyclage en bonne et due forme ont pour but de lutter contre l'impact néfaste potentiel de ce type de produits sur l'environnement et la santé publique. Pour plus d'informations sur le mode d'élimination de votre ancien équipement, veuillez prendre contact avec les pouvoirs publics locaux, le service de traitement des déchets, ou l'endroit où vous avez acheté le produit.

# Italiano (Italian) - Informazioni relative all'ambiente per i clienti residenti nell'Unione Europea

La direttiva europea 2002/96/EC richiede che le apparecchiature contrassegnate con questo simbolo \*\* sul prodotto e/o sull'imballaggio non siano smaltite insieme ai rifiuti urbani non differenziati. Il simbolo indica che questo prodotto non deve essere smaltito insieme ai normali rifiuti domestici. È responsabilità del proprietario smaltire sia questi prodotti sia le altre apparecchiature elettriche ed elettroniche mediante le specifiche strutture di raccolta indicate dal governo o dagli enti pubblici locali. Il corretto smaltimento ed il riciclaggio aiuteranno a prevenire conseguenze potenzialmente negative per l'ambiente e per la salute dell'essere umano. Per ricevere informazioni più dettagliate circa lo smaltimento delle vecchie apparecchiature in Vostro possesso, Vi invitiamo a contattare gli enti pubblici di competenza, il servizio di smaltimento rifiuti o il negozio nel quale avete acquistato il prodotto.

# Latviešu valoda (Latvian) - Ekoloģiska informācija klientiem Eiropas Savienības jurisdikcijā

Direktīvā 2002/96/EK ir prasība, ka aprīkojumu, kam pievienota zīme 🛎 uz paša izstrādājuma vai uz tā iesaiņojuma, nedrīkst izmest nešķirotā veidā kopā ar komunālajiem atkritumiem (tiem, ko rada vietēji iedzīvotāji un uzņēmumi). Šī zīme nozīmē to, ka šī ierīce ir jāizmet atkritumos tā, lai tā nenonāktu kopā ar parastiem mājsaimniecības atkritumiem. Jūsu pienākums ir šo un citas elektriskas un elektroniskas ierīces izmest atkritumos, izmantojot īpašus atkritumu savākšanas veidus un līdzekļus, ko nodrošina valsts un pašvaldību iestādes. Ja izmešana atkritumos un pārstrāde tiek veikta pareizi, tad mazinās iespējamais kaitējums dabai un cilvēku veselībai. Sīkākas ziņas par novecojuša aprīkojuma izmešanu atkritumos jūs varat saņemt vietējā pašvaldībā, atkritumu savākšanas dienestā, kā arī veikalā, kur iegādājāties šo izstrādājumu.

# Lietuvškai (Lithuanian) - Aplinkosaugos informacija, skirta Europos Sąjungos vartotojams

Europos direktyva 2002/96/EC numato, kad įrangos, kuri ir kurios pakuotė yra pažymėta šiuo simboliu (įveskite simbolį), negalima šalinti kartu su nerūšiuotomis komunalinėmis atliekomis. Šis simbolis rodo, kad gaminį reikia šalinti atskirai nuo bendro buitinių atliekų srauto. Jūs privalote užtikrinti, kad ši ir kita elektros ar elektroninė įranga būtų šalinama per tam tikras nacionalinės ar vietinės valdžios nustatytas atliekų rinkimo sistemas. Tinkamai šalinant ir perdirbant atliekas, bus išvengta galimos žalos aplinkai ir žmonių sveikatai. Daugiau informacijos apie jūsų senos įrangos šalinimą gali pateikti vietinės valdžios institucijos, atliekų šalinimo tarnybos arba parduotuvės, kuriose įsigijote tą gaminį.

## Malti (Maltese) - Informazzjoni Ambjentali għal Klijenti fl-Unjoni Ewropea

Id-Direttiva Ewropea 2002/96/KE titlob li t-tagħmir li jkun fih is-simbolu 

fuq il-prodott u/jew fuq l-ippakkjar ma jistax jintrema ma' skart municipali li ma ġiex isseparat. Is-simbolu jindika li dan il-prodott għandu jintrema separatament minn ma' l-iskart domestiku regolari. Hija responsabbiltà tiegħek li tarmi dan it-tagħmir u kull tagħmir ieħor ta' l-elettriku u elettroniku permezz ta' faċilitajiet ta' ġbir appuntati apposta mill-gvern jew mill-awtoritajiet lokali. Ir-rimi b'mod korrett u r-riċiklaġġ jgħin jipprevjeni konsegwenzi negattivi potenzjali għall-ambjent u għas-saħħa tal-bniedem. Għal aktar informazzjoni dettaljata dwar ir-rimi tat-tagħmir antik tiegħek, jekk jogħġbok ikkuntattja lill-awtoritajiet lokali tiegħek, is-servizzi għar-rimi ta' l-iskart, jew il-ħanut minn fejn xtrajt il-prodott.

# Magyar (Hungarian) - Környezetvédelmi információ az európai uniós vásárlók számára

A 2002/96/EC számú európai uniós irányelv megkívánja, hogy azokat a termékeket, amelyeken, és/vagy amelyek csomagolásán az alábbi címke megjelenik, tilos a többi szelektálatlan lakossági hulladékkal együtt kidobni. A címke azt jelöli, hogy az adott termék kidobásakor a szokványos háztartási hulladékelszállítási rendszerektől elkülönített eljárást kell alkalmazni. Az Ön felelőssége, hogy ezt, és más elektromos és elektronikus berendezéseit a kormányzati vagy a helyi hatóságok által kijelölt gyűjtőredszereken keresztül számolja fel. A megfelelő hulladékfeldolgozás segít a környezetre és az emberi egészségre potenciálisan ártalmas negatív hatások megelőzésében. Ha elavult berendezéseinek felszámolásához további részletes információra van szüksége, kérjük, lépjen kapcsolatba a helyi hatóságokkal, a hulladékfeldolgozási szolgálattal, vagy azzal üzlettel, ahol a terméket vásárolta.

# Nederlands (Dutch) - Milieu-informatie voor klanten in de Europese Unie

De Europese Richtlijn 2002/96/EC schrijft voor dat apparatuur die is voorzien van dit symbool 🛎 op het product of de verpakking, niet mag worden ingezameld met niet-gescheiden huishoudelijk afval. Dit symbool geeft aan dat het product apart moet worden ingezameld. U bent zelf verantwoordelijk voor de vernietiging van deze en andere elektrische en elektronische apparatuur via de daarvoor door de landelijke of plaatselijke overheid aangewezen inzamelingskanalen. De juiste vernietiging en recycling van deze apparatuur voorkomt mogelijke negatieve gevolgen voor het milieu en de gezondheid. Voor meer informatie over het vernietigen van uw oude apparatuur neemt u contact op met de plaatselijke autoriteiten of afvalverwerkingsdienst, of met de winkel waar u het product hebt aangeschaft.

#### Norsk (Norwegian) - Miljøinformasjon for kunder i EU

EU-direktiv 2002/96/EF krever at utstyr med følgende symbol avbildet på produktet og/eller pakningen, ikke må kastes sammen med usortert avfall. Symbolet indikerer at dette produktet skal håndteres atskilt fra ordinær avfallsinnsamling for husholdningsavfall. Det er ditt ansvar å kvitte deg med dette produktet og annet elektrisk og elektronisk avfall via egne innsamlingsordninger slik myndighetene eller kommunene bestemmer. Korrekt avfallshåndtering og gjenvinning vil være med på å forhindre mulige negative konsekvenser for miljø og helse. For nærmere informasjon om håndtering av det kasserte utstyret ditt, kan du ta kontakt med kommunen, en innsamlingsstasjon for avfall eller butikken der du kjøpte produktet.

## Polski (Polish) - Informacja dla klientów w Unii Europejskiej o przepisach dotyczących ochrony środowiska

Dyrektywa Europejska 2002/96/EC wymaga, aby sprzęt oznaczony symbolem ½ znajdującym się na produkcie i/lub jego opakowaniu nie był wyrzucany razem z innymi niesortowanymi odpadami komunalnymi. Symbol ten wskazuje, że produkt nie powinien być usuwany razem ze zwykłymi odpadami z gospodarstw domowych. Na Państwu spoczywa obowiązek wyrzucania tego i innych urządzeń elektrycznych oraz elektronicznych w punktach odbioru wyznaczonych przez władze krajowe lub lokalne. Pozbywanie się sprzętu we właściwy sposób i jego recykling pomogą zapobiec potencjalnie negatywnym konsekwencjom dla środowiska i zdrowia ludzkiego. W celu uzyskania szczegółowych informacji o usuwaniu starego sprzętu, prosimy zwrócić się do lokalnych władz, służb oczyszczania miasta lub sklepu, w którym produkt został nabyty.

# Português (Portuguese) - Informação ambiental para clientes da União Europeia

A Directiva Europeia 2002/96/CE exige que o equipamento que exibe este símbolo 🗵 no produto e/ou na sua embalagem não seja eliminado junto com os resíduos municipais não separados. O símbolo indica que este produto deve ser eliminado separadamente dos resíduos domésticos regulares. É da sua responsabilidade eliminar este e qualquer outro equipamento eléctrico e electrónico através das instalações de recolha designadas pelas autoridades governamentais ou locais. A eliminação e reciclagem correctas ajudarão a prevenir as consequências negativas para o ambiente e para a saúde humana. Para obter informações mais detalhadas sobre a forma de eliminar o seu equipamento antigo, contacte as autoridades locais, os serviços de eliminação de resíduos ou o estabelecimento comercial onde adquiriu o produto.

# Română (Romanian) - Informații de mediu pentru clienții din Uniunea Europeană

Directiva europeană 2002/96/CE impune ca echipamentele care prezintă acest simbol ¾ pe produs şi/sau pe ambalajul acestuia să nu fie casate împreună cu gunoiul menajer municipal. Simbolul indică faptul că acest produs trebuie să fie casat separat de gunoiul menajer obișnuit. Este responsabilitatea dvs. să casați acest produs și alte echipamente electrice și electronice prin intermediul unităților de colectare special desemnate de guvern sau de autoritățile locale. Casarea și reciclarea corecte vor ajuta la prevenirea potențialelor consecințe negative asupra sănătății mediului și a oamenilor. Pentru mai multe informații detaliate cu privire la casarea acestui echipament vechi, contactați autoritățile locale, serviciul de salubrizare sau magazinul de la care ați achiziționat produsul.

# Slovenčina (Slovak) - Informácie o ochrane životného prostredia pre zákazníkov v Európskej únii

Podľa európskej smernice 2002/96/ES zariadenie s týmto symbolom \*\* na produkte a/alebo jeho balení nesmie byť likvidované spolu s netriedeným komunálnym odpadom. Symbol znamená, že produkt by sa mal likvidovať oddelene od bežného odpadu z domácností. Je vašou povinnosťou likvidovať toto i ostatné elektrické a elektronické zariadenia prostredníctvom špecializovaných zberných zariadení určených vládou alebo miestnymi orgánmi. Správna likvidácia a recyklácia pomôže zabrániť prípadným negatívnym dopadom na životné prostredie a zdravie ľudí. Ak máte záujem o podrobnejšie informácie o likvidácii starého zariadenia, obráťte sa, prosím, na miestne orgány, organizácie zaoberajúce sa likvidáciou odpadov alebo obchod, v ktorom ste si produkt zakúpili.

# Slovenščina (Slovene) - Okoljske informacije za stranke v Evropski uniji

Evropska direktiva 2002/96/ES prepoveduje odlaganje opreme s tem simbolom ¾ – na izdelku in/ali na embalaži z nesortiranimi komunalnimi odpadki. Ta simbol opozarja, da je treba izdelek zavreči ločeno od preostalih gospodinjskih odpadkov. Vaša odgovornost je, da to in preostalo električno in elektronsko opremo oddate na posebna zbirališča, ki jih določijo državne ustanove ali lokalne oblasti. S pravilnim odlaganjem in recikliranjem boste preprečili morebitne škodljive vplive na okolje in zdravje ljudi. Če želite izvedeti več o odlaganju stare opreme, se obrnite na lokalne oblasti, odlagališče odpadkov ali trgovino, kjer ste izdelek kupili.

### Suomi (Finnish) - Ympäristöä koskevia tietoja EUalueen asiakkaille

EU-direktiivi 2002/96/EY edellyttää, että jos laitteistossa on tämä symboli 🛎 itse tuotteessa ja/tai sen pakkauksessa, laitteistoa ei saa hävittää lajittelemattoman yhdyskuntajätteen mukana. Symboli merkitsee sitä, että tämä tuote on hävitettävä erillään tavallisesta kotitalousjätteestä. Sinun vastuullasi on hävittää tämä elektroniikkatuote ja muut vastaavat elektroniikkatuotteet viemällä tuote tai tuotteet viranomaisten määräämään keräyspisteeseen. Laitteiston oikea hävittäminen estää mahdolliset kielteiset vaikutukset ympäristöön ja ihmisten terveyteen. Lisätietoja vanhan laitteiston oikeasta hävitystavasta saa paikallisilta viranomaisilta, jätteenhävityspalvelusta tai siitä myymälästä, josta ostit tuotteen.

# Svenska (Swedish) - Miljöinformation för kunder i Europeiska unionen

Det europeiska direktivet 2002/96/EC kräver att utrustning med denna symbol ≝ på produkten och/eller förpackningen inte får kastas med osorterat kommunalt avfall. Symbolen visar att denna produkt bör kastas efter att den avskiljts från vanligt hushållsavfall. Det faller på ditt ansvar att kasta denna och annan elektrisk och elektronisk utrustning på fastställda insamlingsplatser utsedda av regeringen eller lokala myndigheter. Korrekt kassering och återvinning skyddar mot eventuella negativa konsekvenser för miljön och personhälsa. För mer detaljerad information om kassering av din gamla utrustning kontaktar du dina lokala myndigheter, avfallshanteringen eller butiken där du köpte produkten.



**WEB:** For additional information, please visit **www.linksys.com** 

# Appendix E: Software License Agreement

# **Software in Linksys Products**

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